TECHNICAL DATA SHEET

PMAFIX IP68 - NVNZ-P-L - Strain relief fitting

Straight, PG long thread



IP68, metal thread strain relief fitting for flexible non-metallic conduit

Applications:
- In railway vehicle and heavy machine construction
- For separation of damp and dry areas

Features & Benefits:
- Very high impact resistance
- With integrated strain relief for optimal ingress protection at the cable (up to IP68 / 5 bar)
- High thread and system connection strength
- Vibration-resistant connection to PMA conduits
- Easy assembly
- High conduit pull-out strength
- Very good chemical properties
- Fits both conduit profiles - fine (T) and coarse (G)

Ingress protection:
- IP66, IP68 & IP69 (EN/IEC 60529)
- IP69, 100 bar with Water impact protection (WPS-ring)
- IP68 (up to 5 bar at the cable)

Materials:
- Fitting body: high-grade, specially formulated polyamide 6
- Thread: nickel-plated brass
- Gland body: polyamide 6
- Sealing insert: CR/NBR

Compatible with:
- PMAFLEX Pro Conduits
- PMAFLEX Multilayer Conduits
- PMAFLEX Conduits
- PMA Smart Line Conduits

Conforms to:
- EN 45545-2 HL3 (R22 & R23)
- NFPA 130
- UL 94 (V0)

Weathering resistance:
- Very good UV resistance and weathering characteristics

Colour:
- Black

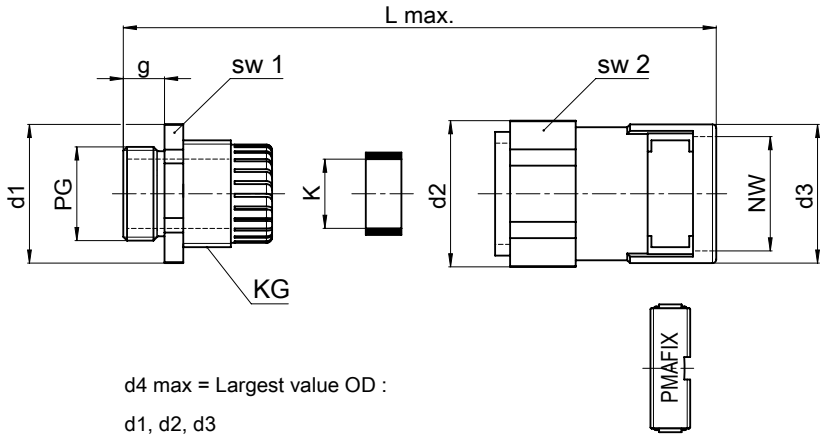
Chemical properties:
- Please refer to www.pma.ch (Technical Information / Chemical Resistance)

Environmental properties:
- Free from halogens and cadmium
- RoHS and REACH compliant

Product selection:

Part no.	Thread size	Conduit size	Cable clamping range in mm	Dimensions in mm (nom.)					Weight	Packing unit
black	PG	NW	K	g	L	d4	SW1	SW2	kg/100pcs	pcs/PU
NVNZ-P090S-L	9	10	4.0 - 8.0	15.0	62.0	20.0	17	21	3.8	50
NVNZ-P110S-L	11	10	4.0 - 8.0	15.0	64.0	20.0	20	24	3.9	50
NVNZ-P112S-L	11	12	5.0 - 10.0	15.0	66.0	23.5	20	24	4.1	50
NVNZ-P167S-L	16	17	10.0 - 14.0	15.0	73.0	29.5	24	27	4.6	50
NVNZ-P213S-L	21	23	13.0 - 18.0	15.0	81.0	38.5	30	36	6.0	30
NVNZ-P299S-L	29	29	18.0 - 25.0	15.0	85.0	44.0	40	42	8.8	20
NVNZ-P366S-L	36	36	24.0 - 32.0	15.0	100.0	53.5	50	55	14.3	20
NVNZ-P488S-L	48	48	34.0 - 44.0	15.0	107.0	66.0	64	70	20.8	10

Our customer service dept. or local distribution partner will be pleased to help you concerning product availability and lead time



d4 max = Largest value OD :

d1, d2, d3

Mechanical Properties:	Value:	Test parameters:	Test method:
Tensile modulus	1‘200 ... 3‘700 N/mm²		ISO 527
Tensile strength	45 ... 65 N/mm²		ISO 527
Notched bar impact test	4 ... 20 kJ/m²		ISO 180/1C
Vibration and shock standard	Cat. 2		IEC 61373, IEC 60068-2-27 / -64

Thermal properties:	Value:	Test parameters:	Test method:
Continuous application temperature	–50 ... +105°C		PMA DO 9.21-4510
Upper application temperature	+120°C	(20'000 h)	PMA DO 9.21-4360
Short-term	+160°C	(168 h)	PMA DO 9.21-4360

Fire safety properties:	Value:	Test parameters:	Test method:
Fire performance	non flame-propagating		IEC EN 61386-1
Flame class	V0		UL 94
Fire hazard level	HL3		EN 45545-2 (R22)
Oxygen index	> 32 %		EN ISO 4589-2
Smoke density	< 150 Ds max.		EN ISO 5659-2 (25 kW/m2)
Toxicity	< 0.75 CIT_{NLP}		NF X 70-100-1/-2: (600°C)
Fire hazard level	HL3		EN 45545-2 (R23)
Oxygen index	> 32 %		EN ISO 4589-2
Smoke density	< 300 Ds max.		EN ISO 5659-2 (25 kW/m2)
Toxicity	< 1.5 CIT_{NLP}		NF X 70-100-1/-2: (600°C)
Fire performance NFPA 130:			NFPA 130
- Flammability	compliant		ASTM E 162
- Smoke density	compliant		ASTM E 662
Heat and visible smoke	26.00 MJ/kg		ASTM E 1354
Smoke emission toxicity	compliant		Bombardier SMP 800-C
Smoke emission toxicity	compliant		Boeing BSS 7239

Note: Fire safety properties only applicable for PMA raw material

Content of delivery:

- Fitting with conduit locking clip (OVN2)
- Conduit gasket (NVN3)
- O-ring (OR)
- Jacob double thread element
- Jacob sealing insert
- Jacob insert with additional O-ring starting from thread size PG36

Assembly instructions:

- Please consider the appropriate assembly instructions on www.pma.ch

Sealing recommendation

If several conductors are used with the connector multiple sealing inserts should be considered

If several cables or conductors are used, or if the cables are below the minimum recommended clamping diameter for the clamping insert, increased deformation of the insert can occur leading to reduced sealing performance. In order to achieve a sealing level corresponding to IP68 PMA generally recommends additional sealing of the clamping thread (KG) using a commonly available thread sealing compound

Please consider our recommendation for adhesives and sealing agents

Temperature range sealing insert Jacob: – 20 ... + 100 °C

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